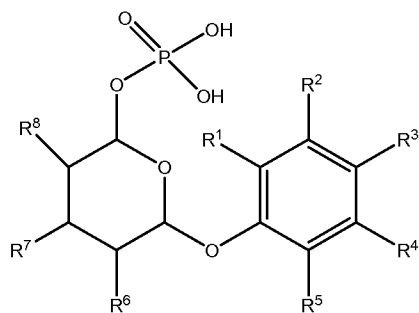


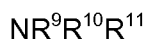
## Amendments to the Claims

1. (Original) A phosphate derivative of a phenolic hydroxy compound comprising the reaction product of the following steps:
  - (a) reacting the phenolic hydroxy compound with an alkyl  $\alpha:\omega$  dialdehyde or a sugar-like polyhydroxy dialdehyde to form a hemiacetal;
  - (b) reducing the terminal aldehyde group on the product from step (a) to a hydroxyl group; and
  - (c) phosphorylating the hydroxyl group formed in step (b) to produce a phosphate derivative of the phenolic hydroxy compound.
2. (Cancelled)
3. (Currently amended) The phosphate derivative of a phenolic hydroxy compound according to claim 1 having the structure of Compound (II)



wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^5$  ~~may~~ are each independently ~~be chosen from~~ H or an alkyl group and  $R^6$ ,  $R^7$  and  $R^8$  ~~can~~ are each independently ~~be~~ H or OH.

4. (Currently amended) The phosphate derivative of a phenolic hydroxy compound according to claim 1 wherein the product of step (c) ~~has been~~ is reacted with a complexing agent selected from the group ~~comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids~~ consisting of arginine or a substituted amine of the following formula:



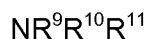
wherein  $R^9$  is chosen from the group consisting of straight or branched chain mixed alkyl radicals from C6 to C22 and carbonyl derivatives thereof, and

R<sup>10</sup> and R<sup>11</sup> are chosen independently from the group comprising H, -CH<sub>2</sub>(CO)OX, -CH<sub>2</sub>CH(OH)CH<sub>2</sub>SO<sub>3</sub>X, -CH<sub>2</sub>CH(OH)CH<sub>2</sub>OPO<sub>3</sub>X<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>COOX, -CH<sub>2</sub>CH<sub>2</sub>CH(OH)CH<sub>2</sub>SO<sub>3</sub>X or -CH<sub>2</sub>CH<sub>2</sub>CH(OH)CH<sub>2</sub>OPO<sub>3</sub>X<sub>2</sub>, wherein X is H, Na, K or alkanolamine provided R<sup>10</sup> and R<sup>11</sup> are not both H; and

wherein when R<sup>9</sup> is R<sup>9</sup>(CO), wherein R<sup>9</sup> is chosen from the group consisting of straight or branched chain mixed alkyl radicals from C6 to C22 and carbonyl derivatives thereof, and R<sup>10</sup> is -CH<sub>3</sub> and R<sup>11</sup> is -(CH<sub>2</sub>CH<sub>2</sub>)N(CH<sub>2</sub>CH<sub>2</sub>(OH))CH<sub>2</sub>PO<sub>3</sub>H or R<sup>10</sup> and R<sup>11</sup> are independently - (CH<sub>2</sub>)<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>(OH))CH<sub>2</sub>(CO)OX, wherein X is H, Na, K or alkanolamine.

5. (Currently amended) The phosphate derivative of a phenolic hydroxy compound according to claim 1 wherein the phenolic hydroxy compound is propofol ~~or a derivative of propofol~~.

6. (Currently amended) The phosphate derivative of a phenolic hydroxy compound according to claim 5 wherein ~~the phosphate derivative of propofol has been~~ is reacted with a complexing agent selected from the group ~~comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids~~ consisting of arginine or a substituted amine of the following formula:



wherein R<sup>9</sup> is chosen from the group consisting of straight or branched chain mixed alkyl radicals from C6 to C22 and carbonyl derivatives thereof, and

R<sup>10</sup> and R<sup>11</sup> are chosen independently from the group comprising H, -CH<sub>2</sub>(CO)OX, -CH<sub>2</sub>CH(OH)CH<sub>2</sub>SO<sub>3</sub>X, -CH<sub>2</sub>CH(OH)CH<sub>2</sub>OPO<sub>3</sub>X<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>COOX, -CH<sub>2</sub>CH<sub>2</sub>CH(OH)CH<sub>2</sub>SO<sub>3</sub>X or -CH<sub>2</sub>CH<sub>2</sub>CH(OH)CH<sub>2</sub>OPO<sub>3</sub>X<sub>2</sub>, wherein X is H, Na, K or alkanolamine provided R<sup>10</sup> and R<sup>11</sup> are not both H; and

wherein when R<sup>9</sup> is R<sup>9</sup>(CO), wherein R<sup>9</sup> is chosen from the group consisting of straight or branched chain mixed alkyl radicals from C6 to C22 and carbonyl derivatives thereof, and R<sup>10</sup> is -CH<sub>3</sub> and R<sup>11</sup> is -(CH<sub>2</sub>CH<sub>2</sub>)N(CH<sub>2</sub>CH<sub>2</sub>(OH))CH<sub>2</sub>PO<sub>3</sub>H or R<sup>10</sup> and R<sup>11</sup> are independently - (CH<sub>2</sub>)<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>(OH))CH<sub>2</sub>(CO)OX, wherein X is H, Na, K or alkanolamine.

7. (Original) The phosphate derivative of a phenolic hydroxy compound according to claim 6 wherein the complexing agent is arginine.

8. (Original) The phosphate derivative of a phenolic hydroxy compound according to

claim 6 wherein the complexing agent is disodium lauryl-imino-dipropionate.

9. (Currently amended) The phosphate derivative of a phenolic hydroxy compound according to claim 1 wherein the alkyl  $\alpha:\omega$  dialdehyde or a the sugar-like polyhydroxy dialdehyde is selected from the group consisting of gluteraldehyde, trihydroxy pentandial, glyoxal and mixtures thereof.

10. (Currently amended) The phosphate derivative of a phenolic hydroxy compound of claim 1 wherein the phenolic hydroxy compound is selected from the group consisting of adrenaline, analgesics, and mixtures thereof.

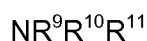
11. (Original) A method for preparing a phosphate derivative of a phenolic hydroxy compound comprising the steps of:

(a) reacting the phenolic hydroxy compound with an alkyl  $\alpha:\omega$  dialdehyde or a sugar-like polyhydroxy dialdehyde to form a hemiacetal;

(b) reducing the terminal aldehyde group on the product from step (a) to a hydroxyl group; and

(c) phosphorylating the hydroxyl group formed in step (b) to produce a phosphate derivative of the phenolic hydroxy compound.

12. (Currently amended) The method according to claim 11 further comprising step (d) reacting the product of step (c) with a complexing agent selected from the group ~~comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids~~ consisting of arginine or a substituted amine of the following formula:



wherein  $\text{R}^9$  is chosen from the group consisting of straight or branched chain mixed alkyl radicals from C6 to C22 and carbonyl derivatives thereof, and

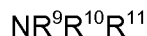
$\text{R}^{10}$  and  $\text{R}^{11}$  are chosen independently from the group comprising H,  $-\text{CH}_2(\text{CO})\text{OX}$ ,  $-\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{SO}_3\text{X}$ ,  $-\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OPO}_3\text{X}_2$ ,  $-\text{CH}_2\text{CH}_2\text{COOX}$ ,  $-\text{CH}_2\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{SO}_3\text{X}$  or  $-\text{CH}_2\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OPO}_3\text{X}_2$ , wherein X is H, Na, K or alkanolamine provided  $\text{R}^{10}$  and  $\text{R}^{11}$  are not both H; and

wherein when  $\text{R}^9$  is  $\text{R}^9(\text{CO})$ , wherein  $\text{R}^9$  is chosen from the group consisting of straight or branched chain mixed alkyl radicals from C6 to C22 and carbonyl derivatives thereof, and  $\text{R}^{10}$  is

-CH<sub>3</sub> and R<sup>11</sup> is -(CH<sub>2</sub>CH<sub>2</sub>)N(CH<sub>2</sub>CH<sub>2</sub>(OH))CH<sub>2</sub>PO<sub>3</sub>H or R<sup>10</sup> and R<sup>11</sup> are independently - (CH<sub>2</sub>)<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>(OH))CH<sub>2</sub>(CO)OX, wherein X is H, Na, K or alkanolamine.

13. (Currently amended) The method according to claim 11 wherein the phenolic hydroxy compound is propofol ~~or a derivative of propofol~~.

14. (Currently amended) The method according to claim 13 comprising the further step of reacting ~~the phosphate derivative of propofol~~ with a complexing agent selected from the group ~~comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids~~ consisting of arginine or a substituted amine of the following formula:



wherein R<sup>9</sup> is chosen from the group consisting of straight or branched chain mixed alkyl radicals from C6 to C22 and carbonyl derivatives thereof, and

R<sup>10</sup> and R<sup>11</sup> are chosen independently from the group comprising H, -CH<sub>2</sub>(CO)OX, -CH<sub>2</sub>CH(OH)CH<sub>2</sub>SO<sub>3</sub>X, -CH<sub>2</sub>CH(OH)CH<sub>2</sub>OPO<sub>3</sub>X<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>COOX, -CH<sub>2</sub>CH<sub>2</sub>CH(OH)CH<sub>2</sub>SO<sub>3</sub>X or -CH<sub>2</sub>CH<sub>2</sub>CH(OH)CH<sub>2</sub>OPO<sub>3</sub>X<sub>2</sub>, wherein X is H, Na, K or alkanolamine provided R<sup>10</sup> and R<sup>11</sup> are not both H; and

wherein when R<sup>9</sup> is R<sup>9</sup>(CO), wherein R<sup>9</sup> is chosen from the group consisting of straight or branched chain mixed alkyl radicals from C6 to C22 and carbonyl derivatives thereof, and R<sup>10</sup> is -CH<sub>3</sub> and R<sup>11</sup> is -(CH<sub>2</sub>CH<sub>2</sub>)N(CH<sub>2</sub>CH<sub>2</sub>(OH))CH<sub>2</sub>PO<sub>3</sub>H or R<sup>10</sup> and R<sup>11</sup> are independently - (CH<sub>2</sub>)<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>(OH))CH<sub>2</sub>(CO)OX, wherein X is H, Na, K or alkanolamine.

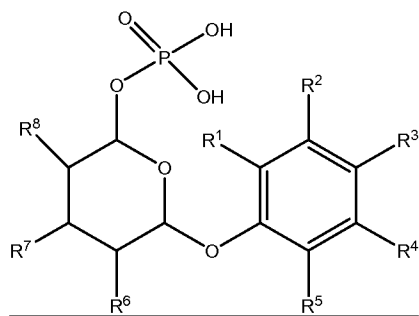
15. (Original) The method according to claim 14 wherein the complexing agent is arginine.

16. (Original) The method according to claim 14 wherein the complexing agent is disodium lauryl-imino-dipropionate.

17. (Currently amended) The method according to claim 11 wherein the alkyl α:ω dialdehyde or a the sugar-like polyhydroxy dialdehyde is selected from the group consisting of gluteraldehyde, trihydroxy pentandial, glyoxyal, and mixtures thereof.

18. – 22. (Cancelled)

23. (Currently amended) A prodrug comprising a phosphate derivative of a phenolic hydroxy compound according to claim 3 ~~any one of claims 1 to 8 when used as a prodrug.~~
24. (Currently amended) An anaesthetic comprising a phosphate derivative of a phenolic hydroxy compound according to claim 3 ~~any one of claims 1 to 8 when used as an anaesthetic.~~
25. (Currently amended) A method for improving the bioavailability of a phenolic hydroxy compound comprising the following steps:
- (a) reacting the phenolic hydroxy compound with an alkyl  $\alpha:\omega$  dialdehyde or a sugar-like polyhydroxy dialdehyde to form a hemiacetal;
  - (b) reducing the terminal aldehyde group on the product from step (a) to a hydroxyl group; and
  - (c) phosphorylating the hydroxyl group formed in step (b) to produce a phosphate derivative of the phenolic hydroxy compound, having the structure of Compound (II)

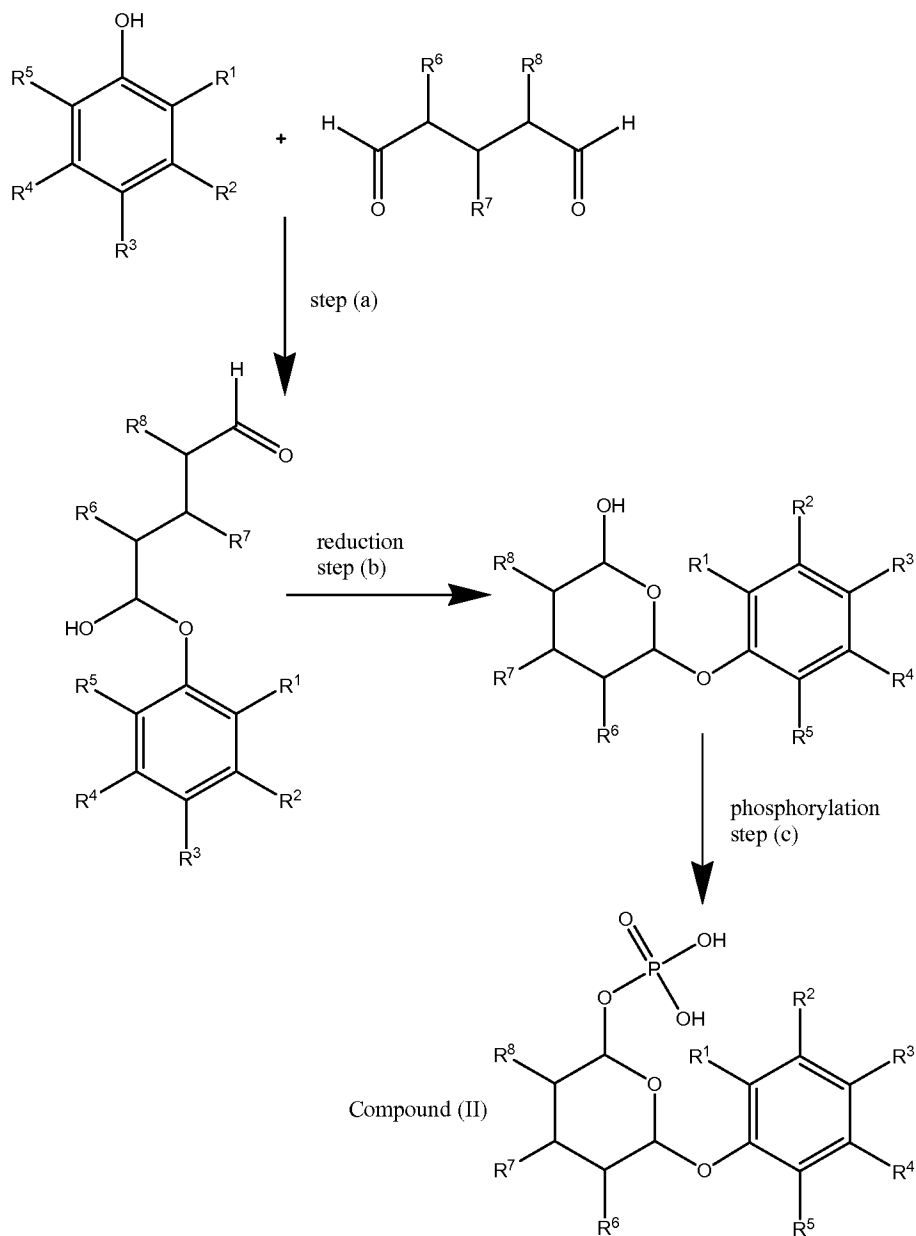


wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are each independently H or an alkyl group and R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are each independently H or OH.

26. (New) The phosphate derivative of a phenolic hydroxy compound according to claim 3 wherein Compound (II) is 2-(2,6-diisopropylphenoxy)-tetrahydropyran-6-yl, dihydrogen phosphate, or 2-(2,6-diisopropylphenoxy)-3,4,5-trihydroxy tetrahydropyran-6-yl, dihydrogen phosphate.
27. (New) The phosphate derivative of a phenolic hydroxy compound according to claim 4 wherein the Compound (II) complex is arginine 2-(2,6-diisopropylphenoxy)-3,4,5-

trihydroxytetrahydropyran-6-yl dihydrogen phosphate complex, arginine 2-(2,6-diisopropylphenoxy)-tetrahydropyran-6-yl dihydrogen phosphate complex, or disodium laurylimino-dipropionate-2-(2,6-diisopropylphenoxy)-tetrahydropyran-6-yl dihydrogen phosphate complex.

28. (New) The method according to claim 11 comprising the following reaction:



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are each independently H or an alkyl group; R<sup>6</sup>, R<sup>7</sup> and R<sup>8</sup> are

each independently H or OH; and n and m are each independently in the range of 0 to 8.

29. (New) The method according to claim 28 wherein Compound (II) is 2-(2,6-diisopropylphenoxy)-tetrahydropyran-6-yl, dihydrogen phosphate, or 2-(2,6-diisopropylphenoxy)-3,4,5-trihydroxy tetrahydropyran-6-yl, dihydrogen phosphate.

30. (New) The phosphate derivative of a phenolic hydroxy compound according to claim 15 wherein the Compound (II) complex is arginine 2-(2,6-diisopropylphenoxy)-3,4,5-trihydroxy tetrahydropyran-6-yl dihydrogen phosphate complex, arginine 2-(2,6-diisopropylphenoxy)-2-hydroxy ethylphosphate complex, arginine 2-(2,6-diisopropylphenoxy)-3,4,5-trihydroxytetrahydropyran-6-yl dihydrogen phosphate complex, arginine 2-(2,6-diisopropylphenoxy)-2-hydroxy ethylphosphate complex, or arginine 2-(2,6-diisopropylphenoxy)-tetrahydropyran-6-yl dihydrogen phosphate complex.

31. (New) The phosphate derivative of a phenolic hydroxy compound according to claim 16 wherein the Compound (II) complex is arginine 2-(2,6-diisopropylphenoxy)-3,4,5-trihydroxytetrahydropyran-6-yl dihydrogen phosphate complex, arginine 2-(2,6-diisopropylphenoxy)-tetrahydropyran-6-yl dihydrogen phosphate complex, or disodium lauryl-imino-dipropionate-2-(2,6-diisopropylphenoxy)-tetrahydropyran-6-yl dihydrogen phosphate complex.

32. (New) The method according to claim 11 wherein the phenolic hydroxy compound is selected from the group consisting of adrenaline, analgesics, and mixtures thereof.